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NASHVILLE JOURNAL

OF

MEDICINE AND SURGERY

CHARLES S. BRIGGS, A. M., M. D., Editor and Proprietor
E. S. McKEE, M. D., Cincinnati, Associate Editor

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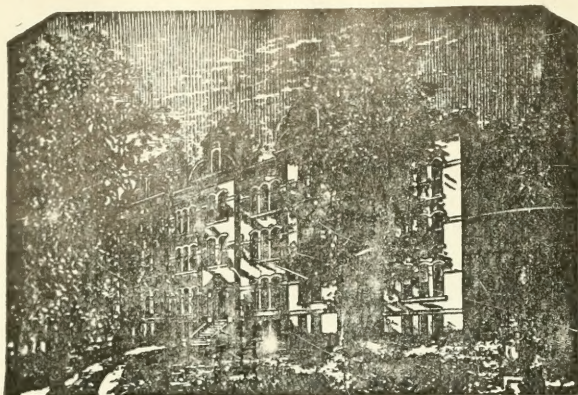
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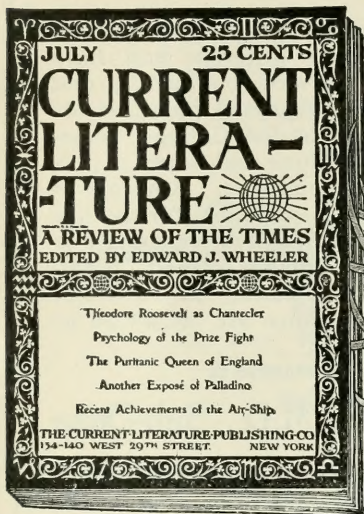
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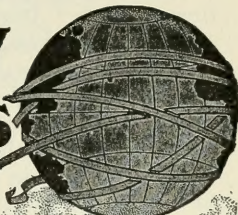
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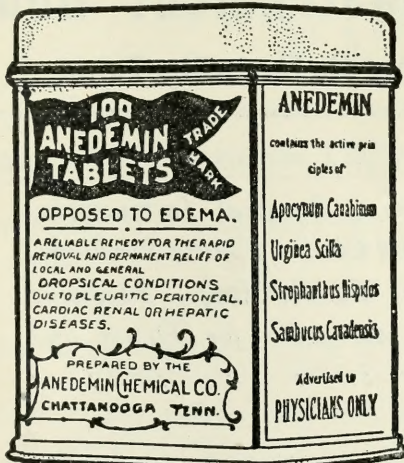
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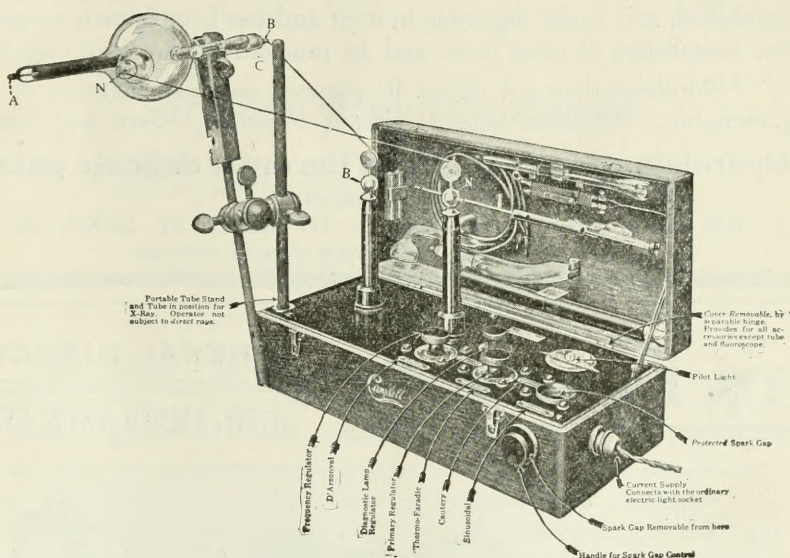
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NASHVILLE JOURNAL — OF — MEDICINE AND SURGERY

CHARLES S. BRIGGS, A. M., M. D., Editor

VOL. CVIII.

MAY, 1914.

No. 5

Original Communications

MEDICAL NOTES FROM THE ORIENT.

By E. S. McKee, M.D., Cincinnati, Ohio.

RACE SUICIDE.

"The womb is an animal which desires ardently to bear children."—*Plato*. In a recent visit to Egypt I met some old medical fellow students and some medical students whom it had been my honor to partially instruct. In fact at a thanksgiving picnic in a garden full of flowers and oriental vegetation, on the banks of the Nile, with dhabehias sailing by, there were present out of 60 Americans—the whole American colony at Assiut—three graduates of the Medical College of Ohio at Cincinnati. They were, Dr. L. M. Henry, for twenty-two years a faithful and successful medical missionary at Assiut; Dr. Aziz Ibrahim, and the writer. I was called a number of times in consultation among the rich and the poor, and generally women. The great majority of these women complained of sterility. Some had gone five, ten, or fifteen years of married life without becoming pregnant. The Egyptian woman, generally, has not much education. And be she rich or poor she has not much work. She simply sits and thinks and sometimes she simply sits. Her whole mind and conversation turns on childbearing. She loses favor with her husband if she does not bear children and with all her friends and

relatives. In Egypt sterility is often a cause for divorce. Divorce is very easy and often in Egypt. A man has simply to say to his wife: "I divorce you, I divorce you, I divorce you," and divorced she is. Easy and inexpensive. I was asked to see one Egyptian woman whose complaint was that though she had four children and two miscarriages she had gone two whole years without conceiving. I have not often been consulted under those circumstances in America. Unchastity among girls in Egypt is almost unknown. Dr. Henry tells me that he has met with but about five cases in 22 years of extensive hospital and private practice in Egypt. The reasons for this are that the girls are trained up to consider it one of the worst things on earth. They are threatened with death if they do, and they are married at puberty. Another thing which may have some influence on the sexual excitability is the fact that when a female child is born the midwife makes traction on the clitoris and snipes it off with the scissors. Although syphilis is very common in Egypt, gonorrhoea is rare and mostly confined to Cairo, and those who having visited Cairo have also visited the foreign demi-mondes there, mostly French, who have introduced gonorrhoea. Under these circumstances of early marriage and long desire for children it is not surprising that the birth rate in Egypt leads that of all countries, nor can we wonder that the infantile death rate also leads the world. It is not uncommon to find a woman who has eight or ten miscarriages or deaths in early infancy begging for more.

Education does not lead to increased childbearing in women. On the contrary it decidedly diminishes it. If we wish to see examples of this we have only to look at the fertility of our pioneer ancestors and that of the highly educated city bred women of our land today. The difference is wonderful.

Though it may appear in bad taste I can not find a better illustration of this falling off in fecundity than in my own family and so will ask pardon for relating it. My father's grandfather when a young man was killed, a soldier in the colonial army in the American Revolution. He left a widow and an infant boy. This boy grew up, married and had eight children. These eight chil-

dren had 13, 8, 6, 5, 3, 2—37 in all. My father was the one who had 13, and this generation of 37 are done bearing and have only borne 22. The next generation promises few.

The family consisted of just a round dozen. It was enough. They wanted no more. Who could blame them. Surely not I. Children had been coming on at regular intervals of two and one-half years. Three and a half had now passed. My parents thought they were to have a long desired and well-earned rest. My immediate predecessor had been considered the baby of the family and spoiled accordingly. I upset all calculations and appeared on the scene. Who knows how much babies know. I have grown gray since, but here on the other side of the world I will attempt to describe, in verse, the scene which was so indelibly impressed on my mind that morning.

NO. 13—THE UNWELCOME GUEST.

A terrible row when I was born,
At four o'clock one winter's morn.
My brothers' said,
"His hair is red."
My sisters' rub,
"His nose is snub."
My father, always good and wise,
"He's a fine boy with big brown eyes."
My mother's plaint, "Am I never done,
'Tis now eight times I've borne a son,
And daughters five
Sure's I'm alive.
From sixteen years to forty-six,
Just thirteen times I'm in this fix.
It's watch and work from morn to morn,
I wish to God I'd never been born."
The rooster crowed (crew),
The wild wind blowed (blew);
The ice grew thick
On the frozen crew.
Why waste our lives on wearisome rows,

'Tis high time now to milk the cows.
We heard a noise at the barnyard gate;
In puffed Doc. Davis an hour too late.
Has happened to me full many a time
Since eighteen hundred and seventy-nine.
Near three-score years have come and gone
Since that wild wintry unwelcome morn.
Father and mother have passed away,
Though their full time allowed to stay.
Of daughters five,
Not one alive.
Of the eight sons, there are no more,
And yet remain exactly four.
Among the last, "The Unwelcome Guest,"
Still wanders the world, not yet "At Rest."
Unabated the wind on the winter's morn
Unanswered the question, "Why was I born?"

The above was partly composed while gazing at the shriveled mummy of Rameses II, at Cairo, Egypt.

THE MILK SUPPLY OF INDIA.

If there is anything which, on the surface, needs improvement in India it is the milk supply. To look at the miserable, half starved, dirty, hobbled cows and buffalo cows of that country is enough for the most inveterate milk fiend to cause him to eschew it altogether. Generally, the milk in India is just as bad as one would suspect it of being. How the cows ever can spare any of their nourishment to go for milk I do not know. It is well that this subject received much attention at the recent sanitary conference at Lucknow. Papers were read by Dr. Joshi, Mr. McMahan and Mr. Rau. Mr. McMahan said that the milk of the Indian Buffalo cows was richer in fat than that of the European milk. I suppose their fat all goes into their milk, for there is certainly none left elsewhere. He said it should not be compared with European milk. Surely not. The author thought that the other standards of milk would be useful in forming standards

of comparison in India. Dr. Turner spoke at length on the advisability of fixing bacteriological as well as chemical standards. Such standards differed locally and should be fixed by persons adequately acquainted with the local conditions. Very large quantities of condensed milk, especially Swiss, are now used in India, and attention was called to the necessity of fixing chemical and bacteriological standards for this as well as the native milk. Recent researches had shown that imported condensed milks were largely contaminated bacteriologically, especially with staphylococci. Dr. Mann, in introducing his paper on the milk supply in India said that he thought that his paper described the first complete examination of the milk supply in India of a large city. In Poona, the city referred to, the amount of milk consumed per head was extremely small, but largely adulterated. In initiating any measures for the improvement of the quality of milk it would necessarily follow that prices would advance and that the poor would be deprived thereby of their milk. Whether no milk or bad milk is worse is an open question. He thought that the amount of milk from each animal should be increased as much as possible. Cows should be removed farther from the cities to cheaper and more healthful surroundings. The milk supply of cities from the outside should be organized and controlled. Dr. Gwell gave statistics on the prices of milk in Lahore, and the profits on the same. He found the expense of feeding cattle responsible for the high price of milk. He complained of the unsanitary practices of the workmen about the handling of milk. He urged the necessity for organization preceding restriction. They could only succeed through coöperating with the producers and should not antagonize them. We hope that the discussion of the milk supply of India at the sanitary conference will bear good fruit. India sadly needs improvement in her milk supply. Her cows need better food and more of it. How to get this in a country where the people are starving is a problem. They need more freedom, not always tied or hobbled or herded. Lastly, they need better cows.

Having been in medicine for more than a third of a century I felt a bit ashamed of myself for never having seen a case of

Asiatic Cholera or Bubonic Plague in my life; this, in spite of extensive clinical experience, both at home and abroad. In India I found cities where both these diseases, as well as smallpox, were epidemic, but here also it was my misfortune or my fortune not to see a case of these diseases. In Manilla, where the United States flag still floats where you can get iced tea, iced water, ice cream, hot biscuits, succotash and hear the English language spoken as she is spoken by one hundred millions, I found a Dr. Jackson from Akron, Ohio, in charge of the San Lazaro Hospital—the infectious hospital. I called him up saying that I had never seen a case of Asiatic Cholera or Bubonic Plague and asked him if he had any in the hospital. He said he had and would be pleased to show them to me. He asked if I would come out this evening or tomorrow. I said either. He said I had better come out this evening as the patients might not live till morning. I went and saw my first cases of these two diseases. They did not seem so frightful as I had expected them to be.

In Java Dutch East Indies the cinchona tree is cultivated to a considerable extent. While there last February I asked to be allowed to visit a quinine factory at Bandoeng. I was refused more firmly than politely. They were afraid that I would steal some of their secrets. A nice characteristic for people manufacturing medicine to heal the sick. Would one feel like trusting those who will trust no one. . Oe in Dutch and in Bandoeng is pronounced like U.

During a recent visit to Canton, China, I was much pleased to see some of the excellent work done by Dr. Mary Niles in her hospital and school for blind girls and Dr. Mary Fulton in her hospital and medical school for women. Both have been long and faithful in the service and both are Americans.

ARE OUR PEOPLE TOO WELL HOUSED?

An Enquiry and a Statement by a Layman.

We laymen are sometimes blessed with an embarrassing amount of advice. We are told to provide ourselves with warm and dry quarters to avoid the many ills coming from excess dampness and from the direct blowing of the winter winds upon us. Again, we are told of the disadvantages of stove heat and of furnace heat and of almost every kind of heat.

On the other hand, we are told to provide moisture; and it seems from the answers to "anxious enquiries" that hardly any device we can conceive of will bring this moisture in the air up to the proper point.

A great deal has been written about cement and other gypsum-made houses. We are told they are unhealthy and impossible, because of their moisture-laden condition, owing to "capillary attraction." We get pages of sage advice upon "drafts," "cold floors" and improper ventilation. Learned articles are turned out galore about the "curse of the privy vault," "danger lurking in well water," and so on, almost without end.

All of these things recurred to me as I packed my belongings, left my modern Chicago apartment and went to Lomax, Henderson County, Illinois, a new city being built after a plan for the betterment of the "common people;" and with many admirable restrictions and provisions which are to be forever existant through a trust deed filed with the court, obligating all rulers now and hereafter to bide by these rulings.

I found that the majority of the houses were built of stucco under a process that they call "pouring," each side of these houses being poured while laying flat, and then stood up after hardening.

The walls are very thin, the material porous, and I heard a great deal said about the houses being damp and the wind blowing through almost without restriction; there being, some claimed, but little more protection from the weather than in a tent.

I moved into one of these houses with some fear and trembling, but decided to "try it out," as I was assured they were only

temporary and would be replaced in time with permanent structures.

I have never spent a winter with as few colds, as few ailments of other kinds, and with as much enjoyment as I have spent in one of those little stucco shacks in Lomax. This caused me to make some investigation and found that this healthy condition was universal—that the ratio of sickness and death was less here than in any older community in this part of the country. This seemed the more remarkable to me, as most of the families were numbered from five to nine persons, and 200 of these houses, for what are called the laboring men, are of but one or two rooms, very small, and like the rest, unfinished on the inside.

Toilet provisions are made at a distance from the house. Water is abundant and the softest and purest I have ever met up with. However, these people must go to outside wells and pump the water. Consequently it is not used in any great quantities for cleansing purposes. There is no running water, no sewer system, and none of the so-called advantages of the metropolis, yet installed.

Still, with all of this, I find that the deaths in two years, ending March 1, 1914, were but 16 in number, and that the average number of inhabitants has been 850 to 900. There have been in the two years only five deaths of people over four years of age. One death, male, 62 years of age, no cause given. One, 45 years of age, typhoid malaria (contracted elsewhere; came home ill). One girl 10 years of age, pneumonia. One man, 75 years of age, natural causes. One boy, 16 years of age, inflammation of the bowels. The others were, three from summer complaint, ranging from two to four years of age. One from cholera-infantum, two months of age. One from tonsillitis, two months of age. One from acute indigestion, at one month, and one baby three months and one eighteen months old of which no cause is given.

The walls of these houses are about 1-inch thick, and unlined. The doors and window casing are loosely set. The wind blows up under the floors; and one morning after a severe blizzard, when asked if I had kept warm, I told my friends that I did by running out doors and getting warm between times of building

fires. During the coldest nights, myself and family slept for the first time in years with our bedroom windows closed, as we got plenty of air without having them raised.

One portion of this town, containing about 160 people, is an old station and postoffice, which has been in existence many years. I find that six of these sixteen deaths occurred in the old town of permanent residences, leaving a total of ten in the two years in the new town of, say, 700 people, housed in little more than tents.

Now, the reason for this, I am not attempting to give—whether it is that the dampness caused by “capillary attraction” protected the people against themselves, by furnishing the necessary moisture (as their heat was almost entirely soft coal, and no attempt made to provide moisture) or whether it is the fact that there, on this broad prairie skirted by hills, the constant inflow of pure air in these houses has been the cause of such healthy conditions, I can not say.

I think there is herein, however, something for the medical profession to investigate. A careful comparison between the death rate of Lomax and of older communities near by, shows a mortality record in the older community of nearly four to one over Lomax. Taking into consideration the houses, the fact that the people live by soft coal fires—hot one minute and cold the next—and without any modern appliances for preserving sanitary conditions, I think there is, as I said above, an opportunity for study by the medical profession into the reasons thereof. In other words, we humbly ask our many advisors, why don't we sicken and die?

Proceedings of Societies

TRANSACTIONS OF THE CLINICAL SOCIETY OF THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

(Stated Meeting, February 20, 1914. The President, John J. Moorhead, M.D., in the Chair.)

"Recent Results with Typhoid Vaccination."*—By Major Frederick F. Russell, Medical Corps, U. S. A., New York, N. Y.

Autotyphoid vaccination has been used in the Army since the early part of 1909, and the results obtained can best be shown in the three following charts:

Chart No. 1 shows the admission rates per 1,000 (that is, the number of cases) for each year from 1901 to date.

The best record obtained by sanitary measures alone is noticed in the year 1908; vaccination, beginning in 1909, has steadily diminished the number of cases, until in 1913, the rate was reduced to 3 cases per 100,000 men. What this signifies may be appreciated when one realizes that the civil *death rate* (not case rate), in the registration area of the United States, was 16.5 per 100,000 of population for the year 1912, the last for which the statistics have been published by the Bureau of Census.

In Chart 2, giving the death rates for typhoid fever, we see the best record previous to the introduction of vaccination was 0.19 per 1,000 made in 1907; this has now been far surpassed by the truly remarkable record of no deaths whatever from this disease in 1913.

Chart No. 3, presents a quantitative measure of typhoid fever, in what is called the constantly non-effective rate; this is a state-

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ment for each day during the year of the average number of men per 1,000, incapacitated for full duty by typhoid fever. This ratio is generally acknowledged to be the truest statistical measure of the loss of efficiency from any given cause. The lowest rate obtained with sanitary measures alone was 0.5 in 1908; this has been rapidly reduced to 0.003 in 1913. In other words there was in 1913, only 1-166 of the loss of time from duty because of typhoid fever which occurred during the record year, 1908, before the introduction of vaccination. These three charts are absolute proof of the efficacy of the typhoid prophylactic.

Have any harmful effects been produced by the typhoid prophylactic? This question may be definitely and decisively answered by the plain statement that no harmful effects have been produced. In the Surgeon General's Annual Report are records not only of typhoid fever, but of all other diseases affecting soldiers' health. Since the Annual Report itself may be consulted by those interested in the subject, in almost any medical library, reference will be made here to two points only. First, the diseases which were more prevalent during 1912 than during the decade ending in 1911, and second, what, if any, has been the effect of vaccination on the rates for tuberculosis?

In answer to the first question we find the report of the Surgeon General states that only eight statistical groups of diseases, show an increase in the case rate per 1,000; these are eruptive fevers, other than measles, smallpox and typhoid (1.90 to 3.65); diphtheria (.49 to 1.01); mumps (11. to 16.99); cancer and other malignant growths (.21 to .22); diseases of the brain and spinal cord (2.90 to 4.09; pleurisy (3.03 to 3.22); tonsillitis and other diseases of the pharynx (64.78 to 65.33); and appendicitis (4.54 to 6.59). There is no reason for believing that the antityphoid vaccination is anyway responsible for these changes. In answer to the second question we find that the case rate for tuberculosis of all kinds shows a decrease from 4.51 per thousand for the decennial period ending in 1911, to 3.49 for the year 1912; a decrease of 22 per cent. On page seventy of the same report is given a tabular statement of all forms of tuberculosis occurring in enlisted men for each year from 1908 to 1912. This table

shows, also, not only that tuberculosis has not increased since the introduction of typhoid vaccination, but that it has actually decreased; a result due, no doubt, to improved sanitation and to the care used in the physical examination of recruits.

TABLE I.

Tuberculosis, all kinds, enlisted men only. Case rate per 1,000.

Year	United States	Philippine Islands	Alaska	Hawaii	Transports	Total
1908----	3.99	6.10	2.96	3.92	3.46	4.39
1909----	4.53	5.06	3.76	2.96	3.00	4.53
1910----	3.34	5.46	1.85	4.10	0.80	3.65
1911----	3.64	3.77	2.68	1.99	1.76	3.55
1912----	3.25	5.02	4.18	2.07	2.74	3.59

The rate per 1,000 has decreased from 4.39 in 1908 to 3.49 in 1912, a diminution of 20 per cent during the past five years.

From the tables and charts here given the conclusion is inevitable that prophylactic vaccine as used in the Army has given almost absolute protection against typhoid fever without producing untoward effects of any character, showing definitely that the vaccination is both efficient and harmless.

The question of living and sensitized vaccine has recently become important. Metchnikoff and Besredka have immunized many apes and found that killed typhoid vaccine did not give sufficient immunity to protect them against subsequent experimental typhoid; in their opinion dead vaccine was of little value and a living sensitized vaccine seemed necessary to protect the apes. While this may be true, it has very little value for us, since we deal with men and not apes. We have vaccinated over 300,000 men and know that vaccination with killed cultures does give almost absolute protection, and there is, therefore, no necessity for using sensitized living vaccines to secure greater protection.

Are there any other reasons why a sensitized vaccine, either living or dead, might be desirable. There is, perhaps, one reason—it may produce milder reactions. Our experience with sensitized vaccines has been limited, and so far as we can judge, the degree of reaction is about equal, and nothing is to be gained by the

use of sensitized vaccines. Further experience with sensitized vaccines may show some advantages not now apparent.

“Further Observations of the Thompson-McFadden Pellagra Commission Upon the Epidemiology of Pellagra.”*—By J. F. Siler, M.D., P. E. Garrison, M.D., and W. J. MacNeal, M.D. New York Post-Graduate Medical School and Hospital.

Pellagra is a very definite pathologic entity characterized by typical lesions on the skin, by gastro-intestinal derangement and by disturbance of the nervous system. This disease is already very prevalent throughout the Southern United States, and cases have been observed occasionally in nearly every state in the Union. In Spartanburg County, South Carolina, we have been able to gather data concerning about 800 cases, the great majority of which have originated in the last three years.

In Spartanburg County, pellagra attacks all classes of the population, but more especially the women and children living in the cotton-mill villages. Pellagra morbidity in males between the ages of fifteen and forty-five is very low.

A statistical study of the food used in six of these mill villages, including about 5,000 persons, failed to reveal any consistent relationship between the use of any particular food and the occurrence of pellagra. A somewhat similar statistical study of the location of domicile of old cases of pellagra in respect to the domicile of the remaining population in these mill villages has shown that pellagra developed almost exclusively in persons living in the same house with such antecedent cases, or next door to them. In other words, the disease spread from a preceding or antecedent case as a center, a phenomenon which can be explained satisfactorily only by assuming that pellagra is an infectious disease. Apparently it is not readily transmitted to any considerable distance.

So far as we have observed, pellagra spreads most readily in

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communities using unscreened surface privies. In those portions of the city of Spartanburg equipped with a water carriage system of sewage disposal, new cases of pellagra were few, and in two mill villages, completely equipped with water carriage sewer systems, it was impossible to find cases of pellagra which had certainly originated there. Individuals suffering from pellagra contracted elsewhere were not lacking in these communities. Practical experiments in the prophylaxis of pellagra along the lines suggested by this work are being undertaken this present year.

DISCUSSION.

Dr. John W. Brannan: I have been asked to tell something of our experience with inoculation of antityphoid vaccine in civil life, especially of what we have been doing for the last two years in some of the city hospitals, mainly with the nurses, and also with the members of the house staff. The nurses were quite ready to co-operate, especially the pupil nurses, but the internes were inclined to object to the operation.

I am familiar with Major Russell's work, and am very glad to hear him say that he has not seen tuberculosis following the typhoid vaccination. Antityphoid inoculation has been carried on for several years in the hospitals in Massachusetts. Two men, Richardson and Spooner, began inoculating the nurses in the Massachusetts General Hospital four years ago; they had previously collected figures and had found that for some ten years back there were from two to six nurses each year in that hospital who had typhoid. Since they have been inoculating, no nurses have contracted the disease, although there has been about the same amount in the wards. From the Massachusetts General Hospital, the practice has spread throughout the state, and into other states, and there are now some thirty or forty, or more, hospitals in the country which are doing it.

When I first suggested doing this work in June, 1912, I found that the heads of the Training School at Bellevue were doubtful as to its necessity. It was their belief that we had had very little typhoid among the nurses, and this proved to be true. We have

had only one or two cases a year, which speaks very well for the sanitation of the wards. However, inoculation was begun and about a year ago I reported the first year's experience. At that time I had inoculated two or three hundred nurses, and sixty or seventy of the house staff. Of the first group of ninety nurses at Bellevue when I began the work—it is entirely voluntary—seven refused inoculation. One of these came down with typhoid, none of the others. The effect of the one case was very marked. From that time on the nurses were very much more willing to be inoculated, as were also the members of the house staff. Since that time we have had three more cases among the uninoculated.

Several things have caused me some apprehension while carrying on this work. Some two or three months after I began, Sir Almroth Wright published his views about the "negative phase," and I feared that I might meet it, especially as the nurses were exposed to typhoid throughout the period of inoculation, but in the next six months the men in the same class as Wright disposed of the "negative phase," and nothing happened to the nurses.

Then came the tuberculosis theory. Nothing was said of it to me in the hospitals, but I felt pretty sure that some of the doctors and nurses had read it. I have seen nothing of the sort, and yet it must be that during these two years I have inoculated some persons who have had a predisposition to tuberculosis. I have made it a point not to ask the nurses what disease they have had, but have requested the nurse who assisted me to make a record of what occurs. Up to now I have inoculated between 500 and 600, and in that number we have had no markedly bad symptoms. Perhaps if some of the persons treated were here they might differ with me, but we certainly had more than Major Russell, especially in the young men. There have been cases of temperature running to 102° or 103° , with chills and pains. One man, one of the neurologists at Bellevue—they seem especially sensitive—told me that he had had a temperature of 103° , with intense pain in the abdomen, and was obliged to stay in bed—yet he had only received one-half cc. I saw him after the second inoculation—also only one-half cc.—and he surely was a very sick man—high temperature, pains, and chills, that lasted for two or three days.

He begged off the third dose, and I agreed. At the same time I inoculated other men of his age, and they had practically no symptoms. I had been inoculated myself, before beginning the work, with the same vaccine that Major Russell uses, and had three doses. The arm was sore after each inoculation and a little stiff, with a patch of redness about the size of my hand. In addition to that, I had a little pain in the back and a slight rise of temperature, headache and malaise—and that was all—lasting for about thirty-six hours. That is what we get in the great majority of cases.

Some of the nurses this year, complained rather more of headache, malaise, temperature, etc., and occasionally one would take a day off, but they generally were satisfied with two or three hours' rest in the afternoon of the day of the inoculation.

In looking over the records today, I was rather interested to see that a group of symptoms would run through the nurses in one hospital, and another group in those in another, although the vaccine and the vaccinator were the same. Here is a group in Harlem, who had no constitutional symptoms. The next group had headache, backache, chills and malaise. The next group had general malaise, with abdominal pain and nausea and vomiting. One nurse at Harlem noticed rose spots on abdomen and chest with more or less fever twenty-four hours after third dose, with tenderness and pain in abdomen. The rash lasted twenty-four hours. When I came to Bellevue I found that although the symptoms are not more severe many of the nurses this year have had nose-bleed. It seemed that after one or two had nose-bleed the others all had it. Many of them stated that they had had "all the symptoms of typhoid fever." In no other hospital have they said anything about typhoid. I asked if any of those who had had these symptoms had had any rash, and the reply was: "No rash, but a blush covering the body in one case."

I have said that doctors as a rule are rather refractory. Here is a group of nine nurses and three doctors. I will read what the nurses said, for it will give you a line on the doctors. The first two nurses complained of nausea and chills, and sore arm. The third had chills and a sore arm; another had chills, back-

ache, headache and sore arm, after the first dose and vomited three times, and had great abdominal distress after the second dose, but they all took all the doses. The remainder of the nurses had no ill effects, with the exception of sore arms. But, continues the report, "the doctors, I am sorry to say, fell out after the first and second doses."

Dr. Russell says that he has found it the same in the army. These are young men, but the older men also do not seem to desire it. Most of them claim that after the age of forty-five years it is not necessary. The attitude of Miss Noyes, the Superintendent of the Training School, has had a great deal to do with the nurses taking hold of it. Bellevue, as a rule, does not welcome new procedures. I think we were the first hospital in New York to do it. She was not in favor of it at first, but after the case of typhoid among the seven who refused, she favored it, and since then we have had no trouble with the pupil-nurses. Our situation is somewhat peculiar. We have 300 nurses, and only about 100 are pupil nurses. We have to depend on nurses coming from other hospitals to take special courses that they cannot get at home. These nurses come for only three or six months, and we cannot persuade most of them to take the inoculation, and we must have the nurses . . . I have tried to insist that no nurse may take care of a typhoid case without being inoculated. Then there are other nurses who are foreign—two or three Danish nurses who insisted that they had been so trained in sanitary precautions that there was absolutely no danger of their acquiring the disease. I explained that when they traveled or went about the country they were in danger, in spite of what they might do, but I did not succeed in persuading them. On the other hand, we have had one or two Danish nurses who asked to be inoculated.

Miss Noyes said that at the meeting of the Hospital Superintendents' Association last year the question was asked as to what hospitals in the country are now doing with inoculation and about thirty replied in the affirmative; but in no hospital is it required. It is still voluntary. I hope that in a few years it will be compulsory, and especially in the case of the house staff. One interne

was inoculated at Gouverneur two years ago, and about a year later came down with typhoid, and since then I have had even more difficulty in that hospital in persuading the men to be inoculated. I presume we shall have to expect such cases, just as we do mild smallpox and varioloid. I do not see anything to contraindicate inoculation.

In one or two instances nurses have had rheumatic arthritic symptoms after inoculation, but of short duration. That has also been noted in the Massachusetts General Hospital.

Dr. H. D. Corbusier: Not much has been said about the use of antityphoid vaccination in private practice, and most men are interested in that subject. I have had a little experience, and having heard of Major Russell's work I took it up. Being interested in the National Guard, I have endeavored to get most of the men to allow themselves to be inoculated, and some of the states have succeeded in inoculating a good many of the men. In my state, New Jersey, many men have been inoculated, but not so many as I could wish for. It should be made compulsory, and physicians should use their influence in persuading men as far as possible to be inoculated before going into camp. That may seem to be a purely military expedient, but it is not, for often when men come home from the camp they bring home typhoid fever and spread it among the communities in which they live, whereas if they were inoculated they would not do so.

About the reactions: In most of the men whom I have inoculated there have been no reactions whatsoever. Of course, these men were not up to the physique of the regular army men. In private practice, the reactions have been mostly in women. Dr. Brannan's cases were exceedingly interesting to me. I would put down 45 per cent of these symptoms as purely hysterical from the fact that a patient would call up the next day and report a "reaction," a very sore arm and a headache perhaps. . . . Mrs. B. would be inoculated, and the next morning she would have very similar symptoms. But the *real* symptoms that I have had amongst women have been very few indeed. One thing that is the cause of this hysteria is the fact that the syringes in which this vaccination is put up are not quite what they should be.

Many of the needles are entirely too large, and when they are pricked into the arm, a sensitive woman will feel it a good deal, and this pain often spreads all over the body, in imagination at least; whereas if a small needle is used there will be very much fewer "reactions."

Dr. MacNeal: In many discussions on pellagra one of the questions asked is: "What microscopic evidence is there to indicate the infectious nature of the disease, or to show that it is due to any other kind of causation?" It would seem that when one asks such a question he fails to realize that in every disease it is first necessary to observe the condition of the patient. The disease must first be studied as it occurs naturally, to learn something about the natural circumstances under which it arises and is distributed, before any one can know where to look for the cause. Many who have not thought very much about it assume that all that is necessary is to put a section of tissue from the human body under a microscope in order to demonstrate the cause of a disease. That is a fallacy. The microscope not only magnifies the things one is looking at, but it magnifies the spaces between the different objects, so that unless one knows where to search nothing is likely to be accomplished.

The attempts at pathological work, aside from the general histological and anatomical examinations, have been made upon the assumption that some parasite would be found in this or that particular spot. Such a guess, if it should prove to be correct, would doubtless advance very much the solution of the problem, but work of this kind has not yet led to success.

It has been necessary to do the work of which Dr. Siler has spoken in order to ascertain where to search for the cause of the disease. It would be fruitless to search for the microbic cause in the skin if it should be proved by other evidence to exist only in the intestine, and a waste of time to search in the intestine if it should be proved to exist in the blood and to be transmitted by insects. If we can ascertain some facts which indicate its location in the body, we can search there. It would be absurd to search for a specific infectious agent, if pellagra should prove to be associated with the use of some particular kind of food or to

be due to some particular food constituent. For this reason the commission has been justified in laying great stress on the observation of the disease as it exists in the field.

We have not, however, neglected other researches, but most of the investigations along other lines may be regarded more or less as stabs in the dark. So far, all these researches have resulted in failure as far as elucidation of the essential causation of pellagra is concerned.

These studies have included examination of the blood in a large number of cases, a study of metabolism in a smaller series of cases, and rather extensive examination of the intestinal bacteria. We have also had opportunity to examine clinically a large number of pellagrins and to follow the course of the disease at their homes and in the hospital.

Other questions commonly asked are the following: "What is the death rate? What is the chance of recovery? What prognosis can we make in pellagra?" It is very difficult to answer these questions. Cases in children under ten have a good prognosis. Nearly all of them seem to recover. We have had in our series only two deaths from pellagra in children under ten years of age, although the disease has been very frequently observed in children. In persons over twenty years of age, the death rate is much higher. From 5 to 15 per cent die in the first attack, and a similar proportion succumb in each of the subsequent recurrences. The remaining 85 to 95 per cent recover from the single attack of the disease, but probably about 90 per cent of them will recur the following year. The other 10 per cent will not recur, but may remain free from further manifestation of the disease. The prognosis is, therefore, not very favorable for ultimate recovery, although a certain percentage will recover each year.

The conditions which determine the prognosis seem to be largely economic. If the patients can pay physicians, have the proper environment, and proper climate and nutrition, the prognosis is fair; but if the patient has to remain in the same environment, and go on as before, the prognosis is bad. The situation is very much the same as with tuberculosis. The disease may be arrested under the influence of better environmental conditions,

but upon return to the former environment it will almost certainly recur, and will recur even under improved conditions if the patient does not take care of himself.

Dr. Moorhead asked about the medicinal treatment of pellagra.

Dr. Siler replied that a number of things have been recommended. The most usual treatment and that which appears to give the best results consists of arsenic preparations. All do not agree about that, and it is not claimed that arsenic has any specific effect. The best time to give it is during late winter and in early spring before the symptoms of the disease appear. If the patients can be gotten in good condition in the spring and kept so, they are quite likely to miss the attack the next season. It was found that women who have had pellagra, if pregnant during the summer months, about 75 per cent will not have symptoms during the period of pregnancy. The important thing is to build up the resistance. Of course, food is an important factor. The nutrition should be increased, but there is no specific treatment for pellagra. If you can give the patients fairly good food and tide them over the worst period during the summer, the chances are that they will recover. The death rate is not now so high as it was a few years ago. Four or five years ago he saw a hundred cases and 50 per cent of them died. The death rate now is supposed to be 26 or 30 per cent, but he was inclined to think that the disease is not so severe as it was a few years ago.

Replying to a question in regard to the percentage of cases of hookworm associated with pellagra, Dr. Siler said that that depended on locality. There was a very small proportion of hookworm in Spartanburg County; the general percentage was not higher than 15 per cent. Farther down the coast where 75 or 80 per cent of the population were infected, hookworm was associated with pellagra. He had heard persons say they thought hookworm was a cause of pellagra, but that was because they were living where the percentage of hookworm infection was high. In Spartanburg they do not have hookworm disease, less than 15 per cent of the population being infected. This was the percentage determined by the laboratory examinations of the commission, and it corresponds with the reports of the Rockefeller Commission.—*The Post-Graduate*.

Selected Articles

ON THE RELATIONSHIP OF THE DUCTLESS GLANDS TO GROWTH.

DISCUSSION.

BY ARTHUR D. DUNN, M.D., Omaha, Neb.

Eugenics of late is becoming such a common topic of discussion, and the problem of evolving the superman is stalking so boldly into our drawing-rooms, that it seems not in apropos to discuss briefly certain glandular factors which influence growth.

Three things are requisite in all growth: First, the necessity for growth; second, food; third, the ability to grow. Growth is a necessity in all multicellular life. Every species has an optimum size which is best adapted for this species in the struggle to maintain itself in its environment; the tendency of all growth is towards this optimum. Individuals who do not approximate it tend to disappear, as, for example, the Australians and Tasmanians in the genus homo. Suitable food is admittedly necessary for all growth because growth is a manifestation of energy. It is not a form of energy, but the result of an energetic, and especially of a chemical situation (Friedenthal). An investigation of the third factor, namely, the ability to grow, leads us into a complexity of problems which are as yet largely unsolved. The protozoon is potentially immortal, dividing periodically and indefinitely into two new individuals. To be sure, at rare intervals the union of two cells occurs, which gives a new impetus to growth, and we find the sexual and asexual cycles, which are so well illustrated by the life history of the hematozoon of malaria. All higher forms require the union of cells from two parents to bring about the development of a new individual. The death of the parent individual follows in a longer or shorter period of time;

therefore, the immortality of the metazoa resides in their offspring.

The exact physico-chemical factors determining the phenomena of growth are largely unknown. In mammals, the activities of certain groups of cells or glands seem to have much to do with the ability to grow. It is with the relationship to growth of this *interlocking glandular directorate, which also profoundly influences metabolism and sexual life*, that this paper has to do. We will consider merely the functions of the hypophysis, thyroid, thymus, and of the interstitial cells of the testicles and ovaries, as they effect the problem of growth. Other physico-chemical correlations are certainly at work, modifying and determining growth, but as yet our knowledge of them is so defective that such correlations may here be omitted.

The Hypophysis.—The relationship of the hypophysis to growth has of late been intensively studied. In 1886, Pierre Marie first directed attention to this hidden gland as having to do with acromegaly, although he not surprisingly attributed the disease to a destructive lesion. Observations have gone far to fix the cause of acromegaly in a hyperfunction of the pars anterior. The fact that destructive lesions are often found at autopsies after the condition has become stationary, does not disprove hyperactivity during the development stage. The operative cases of Hochenegg and Exner are experimental in their precision. Operative removal of the pars anterior in recent cases of acromegaly resulted in a regression of the anatomical manifestations. To-day gigantism is considered as a result of *hyperpituitarism*. In acromegaly the period of activity occurs after epiphyseal ossification is complete; in gigantism the hyperactive stage occurs in childhood or adolescence, before ossification is finished. As the terse phraseology of Launois and Roy has it: "Gigantism is the acromegaly of subjects with unossified epiphyseal cartilages, whatever their ages may be." In giants, we find many of the osseous phenomena of acromegaly, such as prognathism, large sinuses, thick skulls, and enlarged and usually eroded sella. Giants and acromegalics show the same tendencies to lethargy, to slow cerebration, to physical weakness and exhaustion, and to sexual im-

potency. Other physico-chemical combinations of the pituitary are also disturbed, and the life phenomena of acromegalics and giants bear a striking resemblance to each other.

An interesting contrast to the above is revealed by the results of *hypopituitarism* effective during the growth period. Certain cases of infantilism are quite likely the result of pituitary deficiency. These are the "adults in small mould," the true microsome dwarfs, the antitheses of the giants. I have had an infantile under observation whose sella turcica measured 7x9 mm. Her hands and features were delicately chiseled, and although a woman of thirty-two, the expression was girlish, and the body was that of a maiden passing into womanhood. Another form of hypopituitarism has attracted much attention since its description by Frohlich in 1902. It is characterized by *obesity*, *hypotrichosis* and *retarded development of or absence of the secondary sexual characteristics*. Frohlich named this condition *distrophia adiposogenitalis*. Its counterpart with all the salient features have been produced experimentally in dogs by hypo-physectomy (Cushing). Post-mortem observations quite definitely associate the condition with a destructive lesion of the hypophysis. A most interesting combination is the association of this pituitary defect with absence, or marked diminution, of the *stroma cells of the testicles and ovaries*, to which cells is attributed the somatogenic phase of the sexual impulse. Thus, in addition to modifying the growth of the individual, we find the hypophysis reaching out to prevent the reproduction of individuals in whom its functionings are abnormal. *Through its correlations with the testicles and ovaries, and possibly with other organs, it creates impotency and dulls sexual desire—a beautiful phylogenetic protective mechanism.*

Inasmuch as morality in the common mind has not yet been divorced from sexuality, the above relationship has an instructive corollary for the "moralists," to wit., the conception of "morality" in some instances as a phase of disease. It should be unnecessary to state the converse.

The Thyroid—Cretinism.—The association of cretinism and thyroid disease has long been appreciated in regions in which

goiter is endemic. It has been noted that wherever goiter is prevalent, cretinism is common. It is stated that there are 15,000 cretins in Switzerland alone. "The outcome of a host of researches has been the recognition of the enormous importance of the internal secretions of this gland, which is essential for the normal growth of the body in childhood and for the maintenance of the proper metabolism of the epidermic tissues and of the brain" (Osler). The thyroid early received much attention in the study of growth anomalies and its relationship to disturbances in growth is quite well known. This gland in cretins is found to be atrophic and its colloid thickened. In many instances the gland is fibrous. Goiter is present in 63 per cent of cases (Vogt). The histo-pathology of the thyroid in these cases points to a hypofunction, resulting in a peculiar form of dwarfism, which varies markedly from the types associated with pituitary and thymic insufficiencies. The most striking feature of cretinism is a disturbance of growth, which affects the cutaneous and osseous systems. There is arrested or retarded bony development. The skull is small, the base is materially shortened (Virchow), the forehead is low, prognathism is marked, and the nose is retroussé. The pelvis is often small and irregularly shaped. The stature averages from 1 to 1.5 m. The appearance is quite characteristic and the typical case is easily recognized by anyone who has studied photographs. The heavy, coarse-skinned face, the thick-lipped, drooling mouth, the imbecile expression, and the pudgy figure contribute to a picture which is easily of recognition. The hair is coarse and short. In males, the beard is thin or absent. *The secondary sex characteristics are not developed.* The pubic and axillary hair is absent, the penis and testicles are small. The uterus and ovaries and external genitalia are infantile, and in both sexes the organs are ill-fitted for procreation. The sexual instinct is absent or weak. Often there is little of maturity before the fifth or sixth decades.

We again see the race protected by a chemical correlation. The subjects of thyroid insufficiency are illy adapted to the struggle for existence, and are unable to contribute to race progress. They are retrogressive types. *An irresistible hidden force, stronger than*

human-made laws, takes the problem of their propagation out of our hands, and, by a finely adjusted physico-chemical interglandular correlation, renders them incapable of perpetuating their kind.

The Thymus.—The thymus is probably the most important of all the ductless glands in its influence on growth, and at the same time its exact function is least well known. Its evolution and involution follows the growth cycle. Its average weight at birth is 13.26 gms.; from the first to the fifth year, 22.98 gms.; from the eleventh to the fifteenth year, 37.52 gms.; then its size gradually diminishes until the sixth and seventh decades, when its weight averages about 6 gms. It is the only gland in the body that attains its maximum size at the height of the growing period. It must *a priori* have to do with the function of growth. It is the most sensitive of all organs to the nutritional status of the individual and its volume so closely corresponds to general nutritional conditions that Shali speaks of it as the "graduator (Gradmesser) of the state of nutrition." Experimentally, this gland has been proved to be associated with calcium metabolism. Basch found more calcium excreted by dogs in the first weeks after thymectomy than in normal animals. According to Klose and Vogt this phenomenon is the result of an acid intoxication. Basch believes the thymus to be closely associated with the thyroid in its functions. Removal of the thymus in dogs (herbivora are not well adapted for experimental work on account of early ossification) causes marked disturbance in ossification and growth. Three rather well defined periods of varying length occur in thymectomized dogs: (1) Latency; (2) adiposity; (3) cachexia. The growth of the animals is retarded. They are sluggish and bony changes similar to rickets appear. They walk on the whole foot. The hind legs are weak, and both extremities are deformed. The bones are osteoid and typical "rosaries" may be formed. There is enlargement of the epiphyses and the bones are soft and pliable. "The changes in the osseous systems permit of identification with rickets on a purely morphological basis" (Matti). It was not noted that ovulation or spermatogenesis was affected. There is hypertrophy of the hypophysis and of the

thyroid of the pancreas and of the chromaffin part of the adrenals after thymus extirpation. Post-mortem observations to determine the relationship of the thymus to rickets have not been made.

If perverted thymus function is the determining cause of rickets, and the recent experimental evidence points that way, we have another manifestation of a ductless gland exerting a profound influence on growth. Its intimate relations to the chromaffin system, to the other ductless glands, and to the sexual organ, although poorly understood, is manifested in the status thymico-lymphaticus. Sexual activity is not dulled in rachitic dwarfs to any great extent, as in cretinism or hypophysis disease, from plevic deformities in the female. It is with this type that of physically undesirables. It is interesting to note how much more certain and relentless is the check to reproduction by *interglandular correlations* when both defective cerebral and physical development is concerned.

Achondroplasia, Chondrodystrophia Fetalis.—Achondroplasia is in direct contrast in its pathogenesis to rickets. In the former, there is a decided defect in epiphyseal cartilaginous formation; in the latter an excess. Achondroplasia has been attributed to disturbed thymic function, but this is unlikely in view of the probable bearing of the thymus on the etiology of rickets. The changes occurring in the line of ossification in the cretinic and achondroplastic dwarfs are similar, but differ in the fact that in the former the line of ossification remains open indefinitely; in the latter, it closes early, which results in an approximately normal trunk and short, "flapper" extremities. In the former, the genitals are atrophic; in the latter, they are normal. The chondrodystrophic is capable of procreation, although difficulties arise from pelvic deformities in the female. It is with this type that Marie de Medici and Natalie of Russia failed in their efforts to breed a race of dwarfs. The glandular determinants, if any, in achondroplasia are not understood.

The Interstitial Cells (Leydig).—Any discussion, however fragmentary of the correlative functions of the ductless glands in growth, is essentially lacking should we fail to consider the

stroma cells of the testicles and ovaries. The profound effect of castration on the development of mammals is common knowledge. The disproportionately long extremities, the redundancy of fat, the feminine voice in the adult man, the bearded woman, and the numerous abnormal psychic manifestations of castrates are well known. Johannes Brahms said he could nearly always distinguish a masculine woman from a feminine man by their playing, although he admitted at times it was most difficult.

The interstitial cells of the testicle were first described in 1850 by Franz Leydig; until 1900, they were considered merely as nutritive cells, whose function was to supply food stuffs, especially fat, to the maturing spermatozoa. Regaud, Policard and Loisel first regarded them as forming an *interstitial gland with an internal secretion*. Much experimental and clinical evidence has accumulated to support this view.

Roentgenization destroys the germinal cells and leaves the interstitial. *Potentia generandi* disappears, *potentia coeundi* remains normal. Growth and secondary sex manifestations and characteristics are not affected. Sterilization of women, without the unpleasant symptoms which follow castration, has recently been accomplished on therapeutic grounds by roentgenization.

In *cryptorchids* spermatogenesis does not take place, although the development and sex characteristics are normal.

Vasectomy destroys the tubules, the stroma remains intact.

Steinach has shown in his ovarian and testicular transplants that he can at will change the sex characteristics, with the corresponding growth phenomena, in guinea pigs and rabbits. Microscopic examination of the transplants shows that the germinal cells have disappeared and the interstitial cells remain.

The maximum amount of stroma is observed in animals at the breeding season. Tandler observed that in moles in December almost no stroma was present, while in June it constituted the major part of the testicle.

It is evident from the above that the way the germinal glands influence growth and metabolism is by the powerful influence which their hormones exert on the osma. As Tandler so well puts it: "The harmonic collaboration of these organs (germ glands,

thyroid, thymus and hypophysis) times the normal entering into maturity of the individual. This is characterized by the completion of growth, the establishment of sexual potency and the appearance of the secondary sexual characteristics."

Our purpose in this paper has been to give a rough illustrative sketch of the harmonic correlations of certain ductless glands as manifested in growth phenomena. We are often seeing in practice abnormally developing children and abnormally developed adults who come to us for explanation and help. Of help there is some, of explanation there should be much forthcoming. Study of the problems of growth is sure to bring much of economic, social and therapeutic value to society.—*The Lancet-Clinic*.

Extracts from Home and Foreign Journals.

SURGICAL

FISTULA ANI.

In the *Munchener Med. Wochenschrift* for January 27, 1914, is the report of 72 cases of anal fistula operated by Professor Krecke in his private sanatorium from 1896 to 1911. The interesting points in the record are the method of operating and the results, also the fact that only 5 per cent of all the fistulas were tuberculous, the explanation being that the patients were all of the better classes and well nourished, while the statistics which show the high percentages of tuberculous fistulas generally emanate from the free hospitals and hence deal with a entirely different class of patients, a point to my mind very well taken.

The method of operation consisted in excision of the fistula in healthy tissue with any offshoots that might be found and then allowing the wound to heal by granulation. Nearly all the fistulas, however, were superficial to the sphincter ani, which accounts for their easy excision. The cutting of the sphincter was carefully avoided as a dangerous procedure (naturally in the face of the large excision wounds). Even at that, however, in 56 patients from whom the history was obtained, three had complete and 10 incomplete incontinence. This would go to show that after all the good old-fashioned simple cutting of the fistula is the best, even though the author reports that every fistula was cured and that there were no recurrences. But at what a price to cure fistulas that apparently were rather simple: 13 incontinences in 56 patients or 23 per cent! That is certainly something to chill the greatest enthusiasm. It has even caused the operator to pause and wonder whether even 100 per cent cures at an expense of 23 per cent incontinence is not a rather high price to pay for any

operation. However, all honor to the man who has the nerve to publish his results and tell the truth!—*Pacific Medical Journal*.

ETHER DRESSINGS.

Condamin recommends the application to the abdomen in inflammatory edema of the pelvis, subacute phlegmon, and similar conditions, of cotton pads saturated with ether and covered with more cotton and oiled silk. These ether dressings have a sedative action, reduce pain and the absorption of edema is promoted. An ether tampon may also be applied inside the vagina, but this is somewhat painful. He has been using for several years these ether-soaked compresses over a large area, and with constantly increasing satisfaction. The ether has to be continuously applied and in no small dosage.—*The Journal of the Am. Med. Asso.*

GANGRENE OF THE LUNG; OPERATION AND RECOVERY.

Dr. Abraham Mayer reported this case. The patient was a man 36 years of age, born in Italy, and admitted to Lebanon Hospital September 11, 1913. His family history was negative, his father dying of intestinal trouble at the age of sixty and his mother of pneumonia at the age of eighty years. The patient had never before been ill. Twenty-four days before his admission to the hospital he had been suddenly taken sick with a severe chill, followed by high fever. He had severe pain in the right chest with each inspiration. Expectoration, at first slight, became progressively more and more profuse. He was at first thought to have lobar pneumonia, but did not seem to have any crisis. At the time of his admission to the hospital he was only fairly well nourished, looked ill, and had a hot, dry skin. His heart percussed normally as to position and size. The sounds were of good quality and there were no murmurs. The expansion of the lungs was only fair and appeared equal. On the left side there was normal pulmonary resonance, both anteriorly and posteriorly. The respiratory murmur was normal. On the right side posteriorly and just below the angle of the scapula there was an area of

dullness, with entire absence of breathing. Radiating from this point as a center moist rales were present over the entire side anteriorly and posteriorly. Examination of the abdomen and the extremities showed no abnormalities. The sputum was very profuse, fetid, and greenish-brown. It contained shreds, and on standing settled into two distinct layers—the lower greenish-red or brown, and thick, the upper more abundant, pale and thin. When fresh it had a frothy layer which disappeared after standing from twenty-four to thirty hours. Microscopically no tubercle bacilli were found. There were many bacteria, granular and fatty matter, and many crystals. There were few elastic fibers. The first X-ray was taken September 15, 1913, and showed a large area on the right side affected. On account of the wretched condition of the patient the operation of opening the chest wall and evacuating the gangrenous material was divided into two stages. The preliminary operation was done on September 19 and on September 22 the operation was completed. Foul-smelling, grumous material and lung detritus were found. The cavity was the size of a lemon and extended to the root of the lung. The patient made a complete and uneventful recovery and was discharged cured thirty-seven days after admission to the hospital. Dr. Mayer exhibited the X-ray plates and a specimen of the sputum.—*Medical Record*.

VALUE OF PITUITRIN IN SURGICAL SHOCK.

The author noted a marked effect upon the blood-pressure in patients to whom this product was given before they left the operating table. In an illustrative case, at the beginning of the operation the blood-pressure was about 105 mm. Hg, but dropped to 80 a short time after the abdomen was opened, and held approximately at this point throughout the operation. After the first injection of pituitrin in this case, before closure of the wound, the blood-pressure increased to 85 and then to 90 within a short time. At this point a second injection of 10 minims was given, and forty-five minutes later the pressure registered 110. The pulse rate dropped in proportion to the increase in blood-pres-

sure. No evidence of shock was noted although the operation had been rather protracted.

All the author's patients, before leaving the operating room, receive pituitrin, 15 minims, hypodermically. After recovery from anæsthesia, the following measures are used: (1) Fowler position—fifteen inches of elevation of head of bed. (2) Enteroclysis, using glass nozzle with two or more openings. (3) Hypodermics of pituitrin, 15 minims every three hours for 4 doses. (4) Ice caps to the abdomen. (5) Sips of hot water and hot tea; no cracked ice or cold water for the first twelve hours. (6) Hypodermics of morphine, 1-6 grain, and physostigmine, 1-75 grain, for pain or restlessness, to be repeated in three hours if necessary. (7) If blood-pressure is below normal, continuation of pituitrin and addition of hypodermics of camphorated oil, 2 grains every three hours. (8) Catheterization, if necessary, only every eight hours. (9) Water, coffee, tea, orange juice, meat juice, and broths may be given before first bowel movement, after which milk and soft diet may be allowed.

In 800 abdominal operations in which pituitrin was used, the author did not in any instance witness a symptom of shock except in two or three cases, in which a condition simulating "heart exhaustion" was noted. Whether or not this apparent exhaustion was due to overstimulation is a question; many other factors may have been responsible. The symptoms were only transient, the patient responding to stimulation after the administration of pituitrin was discontinued, and in each instance making an uneventful recovery. The writer confirms the experience of others that pituitrin effectually removes gas from the alimentary tract and increases peristalsis.—C. A. Hill, in *Boston Medical and Surgical Journal*, May 15, 1913.

A CASE OF DISSEMINATED CARCINOMA OF THE BREASTS AND AXILLAE IMPROVED BY RADIUM.

The patient, a man, was referred to me by Dr. Beder. The right mammary gland and nipple had ulcerated away and there was another ulcer below that region. Both were adherent and

covered with a red parchment-like epidermis and were surrounded by an indurated margin projecting $\frac{1}{2}$ inch above the level of the skin. Nodular masses larger than a hickorynut but smaller than a hen's egg were present in both axillæ and were widely scattered over the front of the chest. On the right side of the chest the skin over many of these was red, and they were evidently in a way to break down into ulcers. On the left side the nodules were smaller, white, and extended from the nipple in a cord-like mass up into the axilla. The disease had been of several years' duration; no operation even for the removal of a microscopic specimen had been permitted. There was no history of syphilis, and two careful Wassermann examinations were negative. The clinical diagnosis had always been carcinoma, and if so it was evidently similar to the cases of epithelioma cicatrisans, which are sometimes active for as long as eight years before causing death. My patient had lost weight and strength, the skin was adherent to the chest wall, and the use of the right arm was interfered with.

Treatment was by contact applications of a mass of chemically pure radium sulphate containing 20 mg. of radium element having an activity of 20,000 microcuries, in a sealed glass tube 0.3 mm. in thickness, enclosed in aluminum 0.5 mm. thick and in thin, soft rubber. Treatments were three times a week for a month and after that once a week. At each treatment several individual nodules or parts of the nodular borders of the ulcers received an application equal to a total of fifteen minutes in each place. During the first month every growth on the right side had been treated in this way and also the floors of the ulcers, but the left side had not been treated. At the end of this time all the nodular masses on the right side were perfectly flat, and the cicatrized ulcers were no longer adherent but could be raised and bent double. The arm could be raised to the greatest extent. The patient felt stronger and had gained 5 pounds in weight. The left side, untreated, showed marked improvement, strengthening my belief that the application of the Roentgen ray and radium rays to cancer develops some antibody which is carried through the system

and in proper dosage produces benefit to cancer foci beyond the effective reach of the direct rays themselves.

Treatment was then begun on the left side, and the subsequent course of the case has been one of steady progress.—*The Journal of the American Medical Association*.

MEDICAL

TUBERCULOSIS OF THE BREAST.

John B. Deaver (*American Journal of the Medical Sciences*, 1914) has presented a very thorough statistical study of the subject by collecting and analyzing the cases reported since the last complete review, that of Anspach (1904).

Seventy-four cases are brought together and discussed from the standpoints of etiology, pathology, symptomatology, course, coincidence with other diseases, diagnosis and treatment. Of these forty-five are primary and twenty-nine secondary processes in other organs.

Very valuable tables are included in the paper, showing the relative frequency of occurrence of various symptoms, which are well described in the context. Statistics are also presented on age incidence, social condition, relative frequency of occurrence (less than 1 per cent of all mammary affections), sites of additional foci in the secondary cases and methods of treatment.

The portions of the contribution dealing with the pathology are exceptionally valuable. It is worthy of notice that of the entire series of seventy-four cases, in eight only was the diagnosis confirmed by finding the tubercle bacillus, either in smears or in stained sections, and in only two instances was guinea pig inoculation used. In other cases stained sections formed the basis for diagnosis.

Pain he finds to be a relatively infrequent symptom at the onset but during the course of the disease it was of more frequent occurrence, being especially noted just prior to the rupture of the abscess. He disagrees in these figures with Scudder, who states that "pain is an early and constant symptom, often severe in type,

and affecting 50 per cent of cases," but is in accord with Johnson in his work on "Surgical Diagnosis."

Certain observations, expressed tersely, should be stowed away in the memory, such as, "Any patient presenting a lump in the breast and complaining of pain on respiration in the region of the tumor should be skiagraphed for osteitis of the underlying ribs."

The difficulty of differential diagnosis between carcinoma and the sclerosing type of mammary tuberculosis is pointed out and the importance of using the tuberculin reaction is urged, in view of the fact that all cases of this group were diagnosed as carcinoma and accordingly submitted to a radical operation for cancer, whereas much more conservative measures would have been found adequate to effect a cure of the tuberculous affection.

The reported cases of coincidence of tuberculosis and carcinoma, seventeen in number, are analyzed to some extent.

The complete tabulation of the reported cases, with their histories, symptoms, clinical features and pathological characteristics, together with a full bibliography of the subject, combine to make this a most valuable contribution to the study of a comparatively rare disease.—*The Lancet-Clinic*.

THE PART PLAYED BY THE SUPRARENALES IN THE NORMAL REACTIONS OF THE BODY.

Starting from the proposition that the existence of secretory nerves to the suprarenal glands may be regarded as definitely established, the author, at the suggestion of Starling, set out to investigate the action these fibers have on the form of the curve of blood pressure when the peripheral end of the splanchnic nerve is stimulated. The curve does not present a simple rise and fall, but has two summits. The splanchnics were exposed extraperitoneally, and all the nerves to the heart were cut. The second rise, as Lehnendorff had already found, is accompanied by constriction of peripheral blood-vessels (even after denervation) and by acceleration and increased tone of the heart (likewise after denervation). The author finds that the secondary rise and all the

concomitant phenomena are due to the discharge of epinephrin into the circulation, and are absent after extirpation of both suprarenals. Every rise of blood-pressure brought about by the agency of the nervous system thus involves the coöperation of the chemical mechanism represented by the suprarenal glands.—*Monthly Cyclopedia and Medical Bulletin.*

THE FAVORITE FORMULA OR PET PRESCRIPTION.

Every physician, whether optimistic or pessimistic in his general attitude toward the materia medica, usually has a favorite formula—a certain combination of drugs which he uses for many and varied selected conditions. It is his favorite formula; here is mine:

R Codein sulphate -----	1	gr. ii
Acetphenetidin -----	75	gr. xii
Aspirin -----	2	gr. xxxii
Cinchonidin salicylate-----	5	gr. viii

Make eight capsules. One every hour or two.

With this formula, under appropriate conditions, the cure of patients becomes strictly a case of *cito, tuto et jucunde*, as we are admonished it should be. It will symptomatically cure grip, and if given on the first day will in many cases produce such an improvement by the second as to prevent its complications and incidentally—*malum in se*—do away with the doctor. I have used the favorite formula with satisfaction in most inflammations. There are other indications naturally suggested by its ingredients to which it seems excellently adapted and which it is unnecessary to enumerate.—Wilfred M. Barton, M. D., Washington, D. C.—*The Journal of the American Medical Association.*

CONGENITAL HEART DISEASE; PROBABLY PULMONARY STENOSIS
WITH INCOMPLETE VENTRICULAR SEPTUM.

W. Essex Wynter reports the case of a man aged 26 who suffered from pains in both elbows and knees at the end of September, 1913, this being the only occasion on which he could recall

anything of the nature of a rheumatic attack. On account of the loud cardiac murmur he was kept in bed for several weeks, and finally sent to the hospital. The apex beat was just within the nipple line, and pulsation, with dullness on percussion, extended one inch to the right of the sternum. A loud systolic murmur could be heard over the precordia, the point of maximum intensity being in the fourth space near the sternum. It was so loud that it could be heard for some distance radiating from this point, but was best conducted toward the left clavicle in the course of the pulmonary artery. The second sounds were distinct, but not increased, and there was no diastolic murmur. The pulse was normal in character, neither small nor collapsing, and regular. Blood-pressure 170 mm. of mercury. There was no enlargement of the liver, no edema, nor any cyanosis, except during rare attacks of cardiac disturbance, and there was no clubbing of the digitis. The patient had always suffered from shortness of breath on exertion; was never able to play games, and could not perform any arduous work. Blood count: Red cells, 6,512,000; white cells, 6,400; hemoglobin, 100 per cent; index, .08. The X-ray screen disclosed an enlargement of the right ventricle and a limited bulging of the conus arteriosus to the left.—*Proceedings of the Royal Society of Medicine.*

OBSTETRICAL

EARLY OPERATION IN CASES OF UTERINE FIBROIDS.

The passive or expectant attitude was formerly quite generally observed with regard to the treatment of uterine fibroids, though of late not a few voices have been raised in favor of early operation. In the *Medical Press and Circular*, Feb. 18, 1914, Arthur E. Giles makes a fresh plea for early operation in such cases. He states that the possible reasons for the expectant method are: (1) That at the menopause the symptoms disappear and the fibroids tend to shrink. (2) That fibroids are not dangerous tumors. (3) That operation is attended by a high mortality insomuch that the

risk of operation is greater than the risk of leaving things alone; and that years of invalidism and disability are preferable to running the great risk.

Giles thinks that the first of these reasons is based on a succession of fallacies. One of these is the assumption that the only bad symptom of fibroids is hemorrhage. Hemorrhage is only one symptom, and moreover it is a symptom in only some kinds of fibroids. The other symptoms, pain, pressure effects, disability, and general weakness, are not improved by the menopause and may be aggravated. The assumption that hemorrhage caused by fibroids is only menstruation, is one that could be excused only if made by a layman. The argument that fibroids shrink after the menopause will not bear looking into. Giles points out that in many cases they actually increase in size and in the few cases where a shrinkage occurs the effect may be worse than it was before, as a fibroid that lodged previously above the pelvic brim may become impacted in the true pelvis.

As for fibroids not being dangerous tumors the same may be said of ovarian tumors, the dangers of which lie in their possible complications. In the same way, the danger of fibroids, apart from the draining effects of hemorrhage, lies chiefly in their possible complications. Moreover if it could be truly said that ovarian tumors are dangerous but fibroid tumors are not, there still remains the question: Can we be sure, in any given case, that the tumor is a fibroid? Finally the argument based on the high mortality of operation would have had great weight 25 or even 20 years ago; this mortality has dwindled with the progress of abdominal surgery, and hysterectomy may now claim a recognized place, not only as an operation for saving life, but as a means for relieving suffering.

The author's reasons for early operation are as follows: (1) The age incidence of fibroids is so varied that no importance can be attached to age as an indication for operation. (2) Early operation would often allow of a conservative myomectomy, whereas delayed operation necessitates hysterectomy. (3) In a large proportion of cases fibroid tumors are associated with pathological complications, many of which are of a dangerous nature. (4)

Diagnosis is still so uncertain that grave conditions urgently requiring operation may be mistaken for simple fibroids. (5) The mortality attendant on the procedures of myomectomy and hysterectomy in the practice of experienced surgeons has become so reduced that operation may legitimately be advised for the relief of suffering, even when life is not directly threatened.—*Medical Record*.

STENOSIS OF CERVIX UTERI.

After proper dilatation Mathews seizes the anterior lip of the cervix with a volsellum forceps; the lateral borders are grasped by tenaculum forceps; a straight scissors is used in dividing the posterior, or under lip, to the internal os. A curved needle with a silk or No. 1 catgut is introduced, catching the mucous coat and brought through, taking up the mucous coat posteriorly; the ligature is tied. The same procedure takes place on the two lateral surfaces of the wound. The vagina is packed with sterile gauze which is left in position twenty-four hours. The patient is placed in bed for ten days, after which she is allowed to return to her home.—*The Journal of the American Medical Association*.

THYROID ORIGIN OF HEMORRHAGIC UTERINE DISEASE.

In excessive thyroid functioning the coagulability of the blood is much reduced, while in insufficient functioning the coagulation time is much shortened. These effects throw light on certain cases of hemorrhagic uterine disturbances, suggesting that they are abortive forms of myxedema. Among 20 pure cases of hemorrhagic uterine disturbance the author found in 13 of the patients pronounced signs of thyroid hypofunctioning, and in all but one the coagulation time was from four to eight minutes in contrast to the nine or ten minutes with normal blood. The viscosity was frequently below normal—in a number only half of the normal figure. The author supports the view that thyroid insufficiency is a prominent factor in tetany in pregnancy, and possibly also in eclampsia. It is possible that all these conditions are different

stages of the same disturbance in thyroid functioning. In any event the conditions of the thyroid should be ascertained in all cases of eclampsia, and this is easily done by examination of the blood, abnormally rapid coagulation testifying to a lack of the normal thyroid secretion. One of his cases was peculiarly instructive: A young woman with hemorrhagic uterine disturbance had borne twins three years before and had had severe eclampsia at that time; at recent examination the coagulation time was reduced to five minutes, and with a relative neutrophile leucopenia of 45 per cent there was a lymphocytosis of 48 per cent (in contrast to the normal 20 to 25 per cent). It is possible also, he remarks, that the thyroid may be involved in the tendency to habitual abortion. Cases have been reported in which women with goiter who had been married for several years without conceiving bore children after thyroid treatment. Cretin mothers are liable to habitual abortion for a time, but finally bears living children. The habitual abortions of women with infantile uterus suggest that the thyroid may here likewise be in an infantile condition. It seems to be established beyond question that syphilis is not responsible for all cases of habitual abortion.—*Monthly Cyclopedia and Medical Bulletin.*

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

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All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

VIVISECTION.

In a letter from the Chairman of the Bureau for the Protection of Medical Research of the American Medical Association, our attention is called to the fact that the anti-vivisectionists take advantage of the fact that many articles are published by members of the profession doing original research work without making note of the fact that their operative work was conducted under anesthesia. We wish to call the attention of our readers to this in order that should they send articles to the journal which deal with subjects of an experimental nature, they will explicitly state under what conditions these experiments were conducted. If on animals, let it be stated whether the experiments were conducted under anesthesia; if anything of an experimental nature is done to children, let it be stated whether the parents or guardians consented. The anti-vivisectionists are so enthusiastic in their endeavors to stop all experimental work that they take every legitimate advantage to make all experimental work seem cruel and heartless. They ignorantly and knowingly falsify and stop at nothing in order to gain their goal—the abolition of all experimental work. They quote doctors who have been dead and buried for years, and by well chosen omissions chance opinions of well known men are distorted in such a way that the original meaning is entirely changed. They publish statistics to show that serums against diphtheria, tetanus, cerebro-spinal meningitis and other

diseases are not only not beneficial, but absolutely dangerous. They have the effrontery to do this when all hospital records show a marked decrease in diseases treated by serums, especially diphtheria and cerebro-spinal meningitis. They never mention the fact that practically all experiments are conducted under anesthesia. In fact, one of their number published an article in one of the lay magazines in which she stated that surgical anesthesia in the lower animals, especially the dog, meant death. Such a statement shows an absolute ignorance of actual facts, and yet this writer had an article in a popular magazine. Before publishing any such statement the editor should have investigated the matter. To mention the benefits arising from intelligent experiments would reflect on the intelligence of our readers. To withhold from anti-vivisectionists the use of all curative measures that have resulted from animal experimentation would be impossible and undesirable, and yet we feel sure that even a threat of such a step when they realized from what a number of blessings they would be cut off would place many of the anti-vivisectionists among those who are intelligent enough to value one human life above all the dogs in the universe. W. T. B.

PRELIMINARY PROGRAM OF AMERICAN PROCTOLOGIC SOCIETY.

Sixteenth Annual Meeting at Atlantic City, N. J., June 22 and 23, 1914.

PAPERS.

1. A Review of Proctologic Literature for 1913—Samuel T. Earle, Baltimore, Md.
2. Abnormalities of the Colon, as Seen With the Roentgen Ray: Lantern Slide Demonstration—Walter Irwin Le Fever, Cleveland, Ohio.
3. Coccygodynia: A New Method of Treatment by Injections of Alcohol—Frank C. Yeomans, New York City, N. Y.
4. The Technique of the Perineal Operation for Cancer of the Rectum—James A. MacMillan, Detroit, Mich.

5. Myasthenia Gastro-Intestinalis—V. Lee Fitzgerald, Providence, R. I.
6. Further Observations on the Treatment of Pruritus Ani by Autogenous Vaccines—Dwight H. Murray, Syracuse, N. Y.
7. A Report of Cases of Pruritus Ani Treated with Carnotite—Saml. T. Earle, Baltimore, Md.
8. Treatment of Amœbic Dysentery with Emetin Hydrochloride—Alfred J. Zobel, San Francisco, Cal.
9. Amoebic Dysentery and Its Treatment—William M. Beach, Pittsburg, Pa.
10. Some Consideration of Colonic Surgery—Louis J. Hirschman, Detroit, Mich.
11. Myxorrhœa Coli, Membranacea and Colica—Saml. G. Gant, New York City, N. Y.
12. Hemorrhagic Colitis; with Report of Three Cases—Jerome M. Lynch, New York City, N. Y.
13. Retro-Rectal Gumma; Report of Two Cases—Alois B. Graham, Indianapolis, Ind.
14. Anal and Rectal Growths of Benign or Doubtful Character—T. Crittenden Hill, Boston, Mass.
15. Retro-Rectal Infections—Collier F. Martin, Philadelphia, Pa.
16. Radium, Its Use in Proctology—J. Rawson Pennington, Chicago.
17. Rectal Adenomata—Granville S. Hanes, Louisville, Ky.
18. Hyperplastic Tuberculosis of the Colon—J. M. Frankenburg, Kansas City, Mo.
19. Pseudo Intestinal Stasis and Real Intestinal Stasis Demonstrated Roentgenologically—Arthur F. Holding, New York City, N. Y.
20. Local Treatment of Anal Fissure—Jas. A. Duncan, Toledo, Ohio.
21. Reflex Symptoms Arising in the Rectum and Anus—George B. Evans, Dayton, Ohio.
22. Some Unusual Results of Sigmoidoscopy—Ralph W. Jackson, Fall River, Mass.

23. Crude and Careless Diagnostic Methods: Results of, in Reported Cases of Recto-Colonic Condition—John L. Jelks, Memphis, Tenn.

UNITED STATES CIVIL-SERVICE EXAMINATION.

TECHNICAL ASSISTANT IN PHARMACOLOGY (MALE).

June 1, 1914.

The United States Civil Service Commission announces an open competitive examination for technical assistant in pharmacology, for men only. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the Division of Pharmacology, Hygienic Laboratory, Public-Health Service, at salaries ranging from \$1,800 to \$2,000 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will consist of research work in pharmacology, including original investigations in the physiological assay of drugs and of the action of drugs by means of the electro-cardiograph.

Applicants should have a reading knowledge of French and German.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. General educational and scientific training-----	40
2. Experience and fitness -----	40
3. Publications -----	20
Total -----	100

An educational training, including a degree of Doctor of Medicine from an institution of recognized standing, and at least two years' subsequent experience in experimental pharmacology or

physiology, such experience to have included the study, by means of experimental methods, of the action of drugs, are prerequisites for consideration for this position.

Statements as to training, experience and fitness, are accepted subject to verification.

Applicants must have reached their twenty-fifth, but not their fortieth, birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 304 and special from to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Postoffice, Boston, Mass.; Philadelphia, Pa.; Atlanta, Ga.; Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Cal.; Custom House, New York, N. Y.; New Orleans, La.; Honolulu, Hawaii; Old Custom House, St. Louis, Mo.; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on June 1, 1914. In applying for this examination the exact title as given at the head of this announcement should be used.

Reviews and Book Notices

"A Mind Remedy."—By John G. Ryerson, M.D., Boonton, N. J.

This is a singular little book that might excite the curiosity of many readers on account of the unusual trend of the therapeutic applications. The author contends that many diseases that presents no pathology and that have no microscopic origin, and usually looked upon as incurable yield to the administration of lactose or sugar of milk. The author is in the right way, then, when he entitles his book a Mind Remedy. If nothing else can be claimed for the remedy one thing can be said that it is harmless.

"A System of Surgery."—Edited by C. C. Choyce, B.Sc., M.D., F. R. C.S.; and J. Martin Beattie, M.A., M.D., C.M. Three large, octavo volumes, profusely illustrated with hundreds of half-tones and line drawings, and many colored plates. Bound in Interlaken Book Cloth. \$7.00 per volume; \$21.00 per set. Funk & Wagnalls Co., 354-360 Fourth Avenue, New York.

We acknowledge with thanks to the publishers the receipt of Vol. III of this excellent system of surgery. This volume completes the set. We have already received the preceding volumes of this work and have in our book reviews written enthusiastically of the unusually high merits of the set. Vol. III presents the following table of contents: The Cardia-Vascular System, The Lymphatic System—The Neck—The Nose and Accessory Sinuses—The Ear—Pharynx—Naso-Pharynx and Larynx—Direct Examination of the Lower Air Passages and Œsophagus—The Lungs and Pleura—The Nerves—The Scalp—Skull and Brain—The Spine and Spinal Cord—The Jaw—The Skin and Subcutaneous Tissues, Muscles, Fascia and Tendons—Bursa, Diseases of Bones, Fractures and Separated Epiphysis—The Joints—Orthopaedic Surgery. Index to Vol. III—General Index to the Work.

The work is profusely illustrated with beautiful plates and with cuts illustrating the text. Our examination of this well edited

composite work with contributors recognized over the world as authoritative exponents of the department of surgery upon which they write moves us to say that this is one of the very best recent contributions to text-book surgery. Every subject is presented in the clearest, most practical way, and as a guide for the general practitioner in up-to-date surgery it stands without a rival. Dr. John B. Murphy, of Chicago, says of this work. "To have so many surgeons of recognized authority contribute to any system can not fail to make the most of value, both to the student and to the general practitioner. The publishers of this system have placed the profession under lasting obligation for having presented a system of such great value before the surgical world."

LITERARY NOTE.

Be we financier, industrial worker, navy, scavenger, or merely a gentleman, we all suffer to a greater or less degree from the ills which our vocations or avocations engender. Just how to prevent, ameliorate or cure these but partly understood ills, should no longer be a puzzle to the man, employer or physician, because a reliable and essentially practical book is soon to appear, under the joint editorship of Dr. George M. Kober, of Washington, D. C., and Dr. Wm. C. Hanson, of Boston, Mass. Among the contributions are such authorities as Sir Thomas Oliver; Legge (London); Teleky (Vienna); Devoto (Milan); Edsall (Harvard); Alice Hamilton (Chicago); etc.

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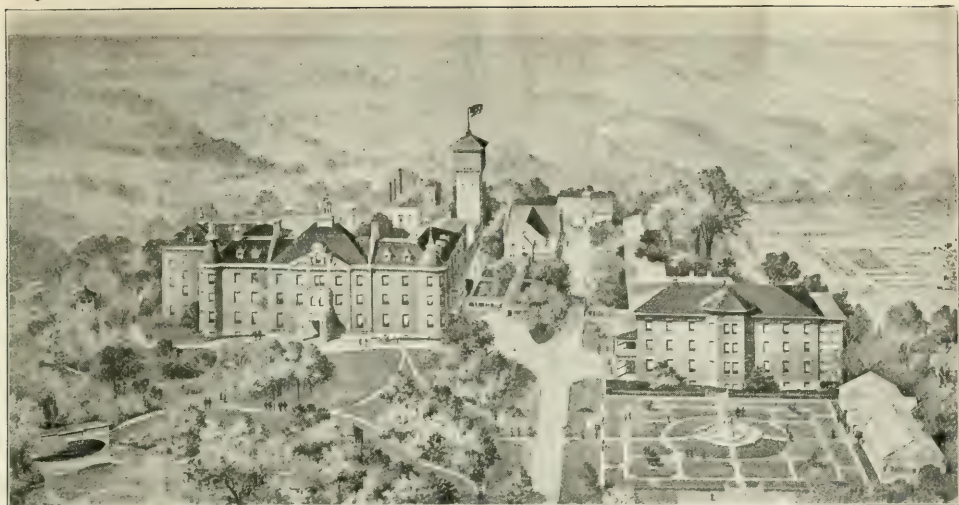
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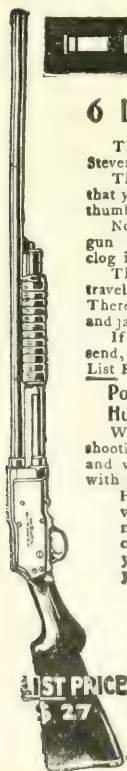
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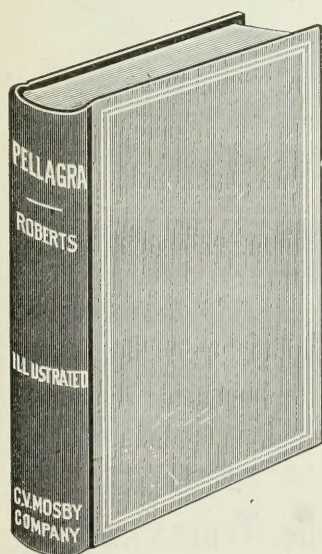
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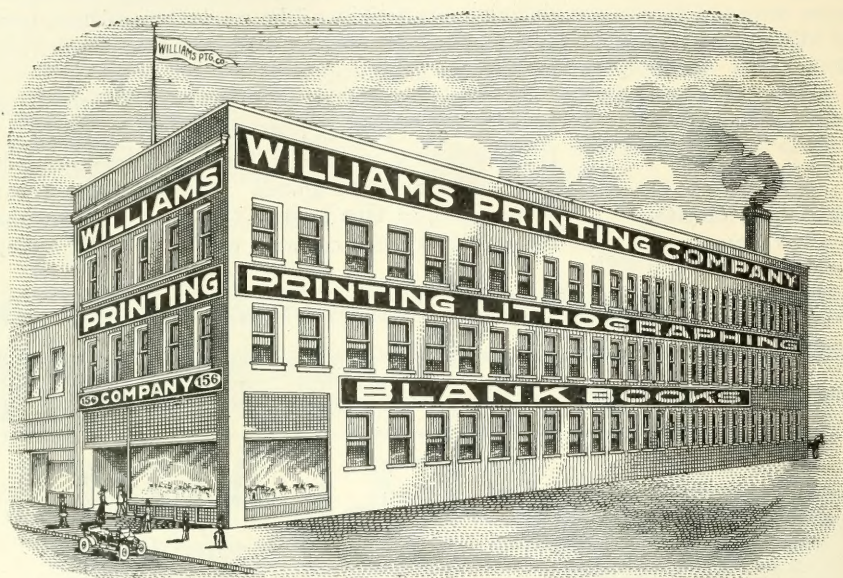
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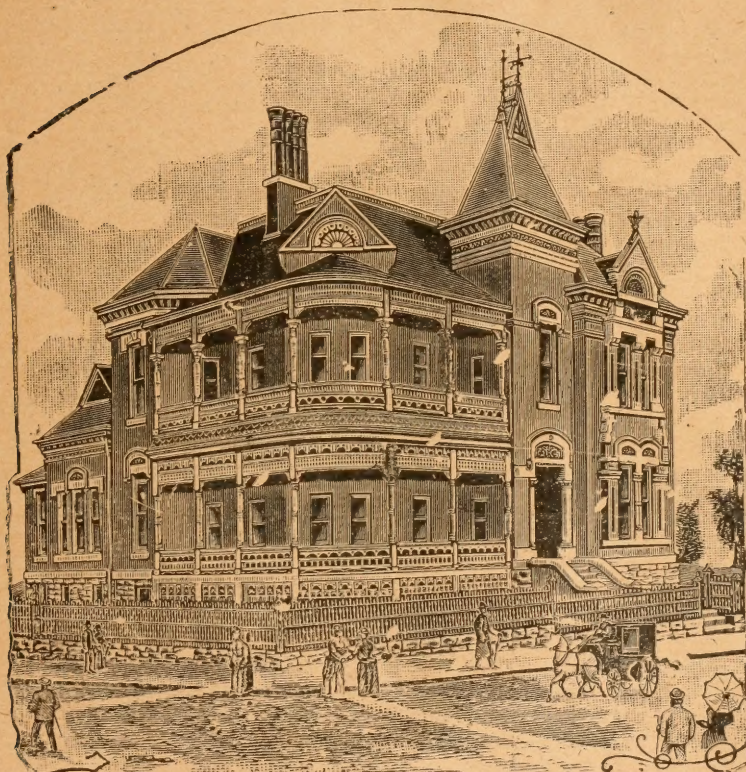


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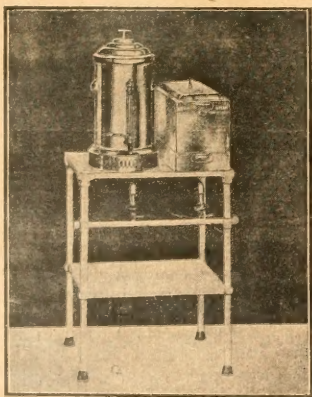
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